

Attorney Docket No. 13054.01600

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the application of  
Francis C. Szoka, Jr. et al.

Examiner: Schnizer

For: pH SENSITIVE LIPIDS BASED ON ORTHO  
ESTER LINKERS,  
COMPOSITION AND METHOD

Group Art Unit: 1635

Serial No. 09/778,388

Filed: March 7, 2001

DRAFTDECLARATION UNDER 37 CFR 1.132

1. I am Dr. Jorge Heller and am an expert in the field of ortho ester chemistry. I have attached a copy of my curriculum vitae as Exhibit A to this declaration.
2. I have reviewed United States Patent Application Serial No. 09/778,388 ("the '388 application") and United States Patent No. 6,200,599 ("the Nantz reference").
3. The ortho ester compositions disclosed in the '388 application share the characteristic that hydrolysis of the ortho ester bond will lead to a direct detachment of the hydrophilic portion from the hydrophobic portion of the composition. This occurs because the ortho ester attachment is through an oxygen atom.
4. The ortho ester compositions disclosed in the Nantz reference exhibit different behavior in that hydrolysis of the ortho ester functionality does not lead to a direct detachment of a hydrophilic portion from the hydrophobic portion of the composition. Instead, hydrolysis of the ortho ester first leads to intramolecular transesterification and then to detachment. This occurs because the ortho ester attachment is through a carbon atom.

5. It is my opinion that ortho esters having the characteristics disclosed in the '388 application are more typical than those disclosed in the Nantz reference. Accordingly, I believe that one of skill in the art would expect an ortho ester composition without specific indication to share the characteristics of the ortho esters of the '388 application rather than the ortho esters disclosed by the Nantz reference.
6. I acknowledge that willful false statements and the like are punishable by fine or imprisonment, or both (18 U.S.C. 1001) and may jeopardize the validity of the application or any patent issuing thereon. All statements made of my own knowledge are true and that all statements made on information and belief are believed to be true.

Date: July 10, 2003

By:

J. Heller

Dr. Jorge Heller